

a detection device configured and disposed to detect fluorescent light emitted from the fluorescent substance in the volume when the microparticle is in the capillary volume and provide an output signal; and

means disposed between said fluorescent substance in said volume and the detector to pass light at said predetermined wavelengths.

2. (unchanged) The device of claim 1, wherein the microparticle is a microorganism.
3. (unchanged) The device of claim 1, wherein the microparticle is a bacterium, virus, or parasite.
4. (unchanged) The device of claim 1, wherein the microparticle is a CD4 cell.
5. (unchanged) The device of claim 1, wherein the microparticle is a fluosphere.
6. (unchanged) The device of claim 5, wherein the fluosphere has been ingested by a filtro-feeder.
7. (unchanged) The device of claim 6, wherein the filtro-feeder has a feeding rate sensitive to a toxicant level in the fluid sample.
8. (unchanged) The device of claim 1, wherein the fluorescent substance is a dye-conjugated antibody.
9. (unchanged) The device of claim 1, wherein the fluorescent substance is a DNA stain.
10. (amended) A device for detecting a microparticle in a fluid, the microparticle being tagged with a fluorescent substance, the fluorescent substance emitting fluorescent light when exposed to electromagnetic radiation, the device comprising:
- a capillary chamber;
 - a fluid delivery system coupled to the capillary chamber, the fluid delivery system capable of introducing the microparticle and the fluid into the capillary chamber;
 - a source of electromagnetic radiation positioned in proximity to the capillary chamber to expose the fluorescent substance to electromagnetic radiation; and

a detection device configured to measure fluorescent light emitted from the fluorescent substance when the microparticle is in the capillary chamber, wherein the fluorescent substance has a magnetic charge.

11. (unchanged) The device of claim 10, further comprising:
a magnetic element positioned in a surrounding relationship to the capillary, the magnetic element having a magnetic charge which repels the fluorescent substance.

12. (unchanged) The device of claim 1, wherein the fluid delivery system is a syringe coupled to a syringe pump.

13. (unchanged) The device of claim 1, wherein the fluid delivery system is a peristaltic pump.

14. (unchanged) The device of claim 1, wherein the source of electromagnetic radiation is at least one laser.

15. (unchanged) The device of claim 1, wherein the detection device is an array of detectors.

Cancel claim 16.

17. (previously amended) The device of claim 1, including means for receiving the output signal from the detection device, processing the signal and providing an output representative of the amount of the fluorescent substance.

18. (twice amended) The device of claim 17, including means for receiving and processing the output from the photodetector to analyze the Mie scattering peaks.

Please cancel claim 19.

20. (twice amended) The device of claim 1, wherein the source of electromagnetic energy comprises a laser.

21. (previously amended) The device of claim 1, wherein a plurality of microparticles are individually transported past the selected location at a substantially uniform velocity.

[Claims 22-23 previously canceled.]

24. (previously amended) The device of claim 7, wherein the fluorescent substance is ingested by the filtro-feeder, and exposure of the filtro-feeder to the toxic substance affects the rate of ingestion of the fluorescent substance by the filtro-feeder.

25. (twice amended) The device of claim 24, further comprising means for calculating the ingestion rate as a function of the amount of fluorescent light emitted from the fluorescent substance at the selected location.

[Claims 26-37 previously canceled.]

Please add the following claims:

38. The device of claim 1 wherein said means is disposed between such fluorescent substance in said volume and the detector to pass light at said predetermined wavelengths comprises a diffraction grating and in which the detection device comprises devices for detecting different wavelengths of light provided by said diffraction grating.

39. A device as in claim 38 in which the source of electromagnetic energy comprises a plurality of lasers operating at different wavelengths.